

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-22. (Cancelled)

1 23. (New) A method for computing assignments of data stores to
2 storage device logical units for a data storage system design comprising:
3 selecting a plurality of data stores for each of a plurality of data store
4 clusters;
5 clustering the selected data stores thereby forming the data store
6 clusters; and
7 assigning the data store clusters to the storage device logical units
8 using a machine-implemented design algorithm by which constraint
9 calculations are performed at the cluster level for each data store cluster.

1 24. (New) The method according to claim 23, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores according to an order in which the data
4 stores are presented.

1 25. (New) The method according to claim 23, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores in random order.

1 26. (New) The method according to claim 23, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores according to an order in which the data
4 stores are sorted based on characteristics of the data stores.

1 27. (New) The method according to claim 26, wherein the
2 characteristics include size of the stores.

1 28. (New) The method according to claim 26, wherein the
2 characteristics include aggregate stream demands.

1 29. (New) The method according to claim 23, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores according to an order in which the data
4 stores are sorted based on similarity of characteristics.

1 30. (New) The method according to claim 29, wherein the
2 characteristics include reliability or storage class requirements.

1 31. (New) The method according to claim 29, wherein the
2 characteristics include layout requirements.

1 32. (New) The method according to claim 29, wherein the
2 characteristics include importance.

1 33. (New) The method according to claim 23, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores according to an order in which the data
4 stores are sorted based on desired properties for a particular data store cluster.

1 34. (New) The method according to claim 23, wherein said clustering
2 the selected data stores for a particular one of the data store clusters comprises
3 clustering a determined number of the data stores together.

1 35. (New) The method according to claim 23, wherein said clustering
2 the selected data stores is based on capacity.

1 36. (New) The method according to claim 35, wherein aggregate
2 capacity requirements of the data store clusters prevent more than a particular
3 number, N, of the data store clusters from being assigned per logical unit.

1 37. (New) The method according to claim 23, wherein said clustering
2 the selected data stores is based on bandwidth.

1 38. (New) The method according to claim 37, wherein aggregate
2 bandwidth requirements of the data store clusters prevent more than a
3 particular number, N, of the data store clusters from being assigned per logical
4 unit.

1 39. (New) The method according to claim 23, wherein said clustering
2 the selected data stores is based on capacity and bandwidth wherein aggregate
3 capacity and bandwidth requirements of the data store clusters prevent more
4 than a particular number, N, of the data store clusters from being assigned per
5 logical unit.

1 40. (New) The method according to claim 39, wherein said selecting
2 a plurality of data stores for a particular one of the data store clusters
3 comprises selecting the data stores in random order.

1 41. (New) The method according to claim 23, further comprising de-
2 clustering the data stores.

1 42. (New) The method according to claim 23, further comprising
2 determining whether all of the data stores have been assigned and, if all of the
3 data stores have been assigned, outputting a resulting assignment.

1 43. (New) The method according to claim 23, further comprising
2 determining whether all of the data stores have been assigned and, if not all of
3 the data stores have been assigned, reducing a cluster size and repeating said
4 steps of selecting, clustering and assigning.

1 44. (New) A computer-readable medium having stored thereon a
2 computer program for performing a method of designing storage systems, the
3 method comprising steps of:

4 selecting a plurality of data stores for each of a plurality of data
5 store clusters;
6 clustering the selected data stores thereby forming the data
7 store clusters; and
8 assigning the data store clusters to the storage device logical
9 units using a machine-implemented design algorithm by which constraint
10 calculations are performed at the cluster level for each data store cluster.